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## PATENT COOPERATION TREATY

PCT

From the INTERNATIONAL BUREAU

NOTIFICATION OF RECEIPT OF  
RECORD COPY

(PCT Rule 24.2(a))

擔當	代理	次長	部長・辨理士	副所長	所長	官長	秘書

8th Floor, Poonglim Bldg.  
823-1 Yeoksam-dong, Kangnam-ku  
135-784 Seoul  
RÉPUBLIQUE DE CORÉE

Date of mailing (day/month/year) 11 July 2000 (11.07.00)	IMPORTANT NOTIFICATION
Applicant's or agent's file reference 2000PCT007	International application No. PCT/KR00/00549

The applicant is hereby notified that the International Bureau has received the record copy of the international application as detailed below.

Name(s) of the applicant(s) and State(s) for which they are applicants:

PARK, Won-Seop (all designated States)

International filing date : 29 May 2000 (29.05.00)

Priority date(s) claimed : 31 May 1999 (31.05.99)

05 June 1999 (05.06.99)

Date of receipt of the record copy  
by the International Bureau

28 June 2000 (28.06.00)

List of designated Offices

AP : GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW

EA : AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

EP : AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE

OA : BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

National : AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB,

GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK,

MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA,

ZW

## ATTENTION

The applicant should carefully check the data appearing in this Notification. In case of any discrepancy between these data and the indications in the international application, the applicant should immediately inform the International Bureau.

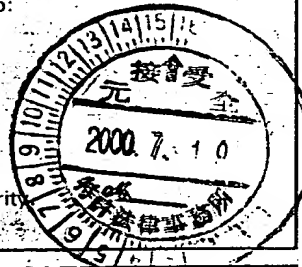
In addition, the applicant's attention is drawn to the information contained in the Annex, relating to:

☒ time limits for entry into the national phase.

☒ confirmation of precautionary designations.

☒ requirements regarding priority documents.

A copy of this Notification is being sent to the receiving Office and to the International Searching Authority.



The International Bureau of WIPO  
34, chemin des Colombettes  
1211 Geneva 20, Switzerland

Facsimile No. (41-22) 740.14.35

Authorized officer:

R. Raissi

Telephone No. (41-22) 338.83.38

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**INFORMATION ON TIME LIMITS FOR ENTERING THE NATIONAL PHASE**

The applicant is reminded that the "national phase" must be entered before each of the designated Offices indicated in the Notification of Receipt of Record Copy (Form PCT/IB/301) by paying national fees and furnishing translations, as prescribed by the applicable national laws.

The time limit for performing these procedural acts is **20 MONTHS** from the priority date or, for those designated States which the applicant elects in a demand for international preliminary examination or in a later election, **30 MONTHS** from the priority date, provided that the election is made before the expiration of 19 months from the priority date. Some designated (or elected) Offices have fixed time limits which expire even later than 20 or 30 months from the priority date. In other Offices an extension of time or grace period, in some cases upon payment of an additional fee, is available.

In addition to these procedural acts, the applicant may also have to comply with other special requirements applicable in certain Offices. It is the applicant's responsibility to ensure that the necessary steps to enter the national phase are taken in a timely fashion. Most designated Offices do not issue reminders to applicants in connection with the entry into the national phase.

For detailed information about the procedural acts to be performed to enter the national phase before each designated Office, the applicable time limits and possible extensions of time or grace periods, and any other requirements, see the relevant Chapters of Volume II of the PCT Applicant's Guide. Information about the requirements for filing a demand for international preliminary examination is set out in Chapter IX of Volume I of the PCT Applicant's Guide.

GR and ES became bound by PCT Chapter II on 7 September 1996 and 6 September 1997, respectively, and may, therefore, be elected in a demand or a later election filed on or after 7 September 1996 and 6 September 1997, respectively, regardless of the filing date of the international application. (See second paragraph above.)

Note that only an applicant who is a national or resident of a PCT Contracting State which is bound by Chapter II has the right to file a demand for international preliminary examination.

**CONFIRMATION OF PRECAUTIONARY DESIGNATIONS**

This notification lists only specific designations made under Rule 4.9(a) in the request. It is important to check that these designations are correct. Errors in designations can be corrected where precautionary designations have been made under Rule 4.9(b). The applicant is hereby reminded that any precautionary designations may be confirmed according to Rule 4.9(c) before the expiration of 15 months from the priority date. If it is not confirmed, it will automatically be regarded as withdrawn by the applicant. There will be no reminder and no invitation. Confirmation of a designation consists of the filing of a notice specifying the designated State concerned (with an indication of the kind of protection or treatment desired) and the payment of the designation and confirmation fees. Confirmation must reach the receiving Office within the 15-month time limit.

**REQUIREMENTS REGARDING PRIORITY DOCUMENTS**

For applicants who have not yet complied with the requirements regarding priority documents, the following is recalled.

Where the priority of an earlier national, regional or international application is claimed, the applicant must submit a copy of the said earlier application, certified by the authority with which it was filed ("the priority document") to the receiving Office (which will transmit it to the International Bureau) or directly to the International Bureau, before the expiration of 16 months from the priority date, provided that any such priority document may still be submitted to the International Bureau before that date of international publication of the international application, in which case that document will be considered to have been received by the International Bureau on the last day of the 16-month time limit (Rule 17.1(a)).

Where the priority document is issued by the receiving Office, the applicant may, instead of submitting the priority document, request the receiving Office to prepare and transmit the priority document to the International Bureau. Such request must be made before the expiration of the 16-month time limit and may be subjected by the receiving Office to the payment of a fee (Rule 17.1(b)).

If the priority document concerned is not submitted to the International Bureau or if the request to the receiving Office to prepare and transmit the priority document has not been made (and the corresponding fee, if any, paid) within the applicable time limit indicated under the preceding paragraphs, any designated State may disregard the priority claim, provided that no designated Office may disregard the priority claim concerned before giving the applicant an opportunity to furnish the priority document within a time limit which is reasonable under the circumstances.

Where several priorities are claimed, the priority date to be considered for the purposes of computing the 16-month time limit is the filing date of the earliest application whose priority is claimed.

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## PATENT COOPERATION TREATY

From the INTERNATIONAL BUREAU

NOTIFICATION CONCERNING  
SUBMISSION OR TRANSMITTAL  
OF PRIORITY DOCUMENT

(PCT Administrative Instructions, Section 411)

To: 長 官 長 官 供  
YIM, Suk Jae  
8th Floor, Poonglim Bldg.  
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135-784 Seoul  
RÉPUBLIQUE DE CORÉE

Date of mailing (day/month/year) 02 November 2000 (02.11.00)	
Applicant's or agent's file reference 2000PCT007	IMPORTANT NOTIFICATION
International application No. PCT/KR00/00549	International filing date (day/month/year) 29 May 2000 (29.05.00)
International publication date (day/month/year) Not yet published	Priority date (day/month/year) 31 May 1999 (31.05.99)
Applicant PARK, Won-Seop	

- The applicant is hereby notified of the date of receipt (except where the letters "NR" appear in the right-hand column) by the International Bureau of the priority document(s) relating to the earlier application(s) indicated below. Unless otherwise indicated by an asterisk appearing next to a date of receipt, or by the letters "NR", in the right-hand column, the priority document concerned was submitted or transmitted to the International Bureau in compliance with Rule 17.1(a) or (b).
- This updates and replaces any previously issued notification concerning submission or transmittal of priority documents.
- An asterisk(\*) appearing next to a date of receipt, in the right-hand column, denotes a priority document submitted or transmitted to the International Bureau but not in compliance with Rule 17.1(a) or (b). In such a case, the attention of the applicant is directed to Rule 17.1(c) which provides that no designated Office may disregard the priority claim concerned before giving the applicant an opportunity, upon entry into the national phase, to furnish the priority document within a time limit which is reasonable under the circumstances.
- The letters "NR" appearing in the right-hand column denote a priority document which was not received by the International Bureau or which the applicant did not request the receiving Office to prepare and transmit to the International Bureau, as provided by Rule 17.1(a) or (b), respectively. In such a case, the attention of the applicant is directed to Rule 17.1(c) which provides that no designated Office may disregard the priority claim concerned before giving the applicant an opportunity, upon entry into the national phase, to furnish the priority document within a time limit which is reasonable under the circumstances.

Priority date	Priority application No.	Country or regional Office or PCT receiving Office	Date of receipt of priority document
31 May 1999 (31.05.99)	1999/19733	KR	10 Octo 2000 (10.10.00)
05 June 1999 (05.06.99)	1999/20803	KR	NR

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland	Authorized officer S. De Michiel
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## PATENT COOPERATION TREATY

From the INTERNATIONAL BUREAU	
擔當代理次長部長 PCT NOTICE INFORMING THE APPLICANT OF THE COMMUNICATION OF THE INTERNATIONAL APPLICATION TO THE DESIGNATED OFFICES (PCT Rule 47.1(c), first sentence)	To: YIM Suk-Jae 8th Floor, Poonglim Bldg. 823-1 Yeoksam-dong, Kangnam-ku 135-784 Seoul RÉPUBLIQUE DE CORÉE

Date of mailing (day/month/year) 07 December 2000 (07.12.00)		IMPORTANT NOTICE
Applicant's or agent's file reference 2000PCT007		
International application No. PCT/KR00/00549	International filing date (day/month/year) 29 May 2000 (29.05.00)	Priority date (day/month/year) 31 May 1999 (31.05.99)
Applicant PARK, Won-Seop		

1. Notice is hereby given that the International Bureau has communicated, as provided in Article 20, the international application to the following designated Offices on the date indicated above as the date of mailing of this Notice:

AU, KP, KR, US

In accordance with Rule 47.1(c), third sentence, those Offices will accept the present Notice as conclusive evidence that the communication of the international application has duly taken place on the date of mailing indicated above and no copy of the international application is required to be furnished by the applicant to the designated Office(s).

2. The following designated Offices have waived the requirement for such a communication at this time:

AE, AL, AM, AP, AT, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EA, EE, EP, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, OA, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW

The communication will be made to those Offices only upon their request. Furthermore, those Offices do not require the applicant to furnish a copy of the international application (Rule 49.1(a-bis)).

3. Enclosed with this Notice is a copy of the international application as published by the International Bureau on

07 December 2000 (07.12.00) under No. WO 00/74253

### REMINDER REGARDING CHAPTER II (Article 31(2)(a) and Rule 54.2)

If the applicant wishes to postpone entry into the national phase until 30 months (or later in some Offices) from the priority date, a demand for international preliminary examination must be filed with the competent International Preliminary Examining Authority before the expiration of 19 months from the priority date.

It is the applicant's sole responsibility to monitor the 19-month time limit.

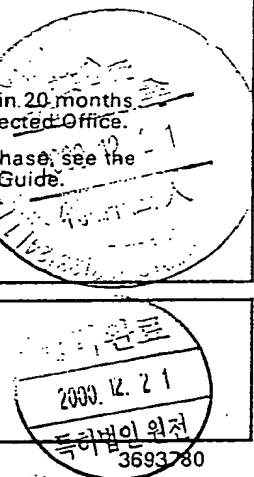
Note that only an applicant who is a national or resident of a PCT Contracting State which is bound by Chapter II has the right to file a demand for international preliminary examination.

### REMINDER REGARDING ENTRY INTO THE NATIONAL PHASE (Article 22 or 39(1))

If the applicant wishes to proceed with the international application in the national phase, he must, within 20 months or 30 months, or later in some Offices, perform the acts referred to therein before each designated or elected Office.

For further important information on the time limits and acts to be performed for entering the national phase, see the Annex to Form PCT/IB/301 (Notification of Receipt of Record Copy) and Volume II of the PCT Applicant's Guide.

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No. (41-22) 740.14.35	Authorized officer J. Zahra Telephone No. (41-22) 338.83.38
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(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
7 December 2000 (07.12.2000)

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(74) Agents: YIM, Suk-Jae et al.; 8th Floor, Poonglim Bldg.,  
823-1 Yeoksam-dong, Kangnam-ku, 135-784 Seoul (KR).

(21) International Application Number: PCT/KR00/00549

(81) Designated States (*national*): AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.

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(71) Applicant and

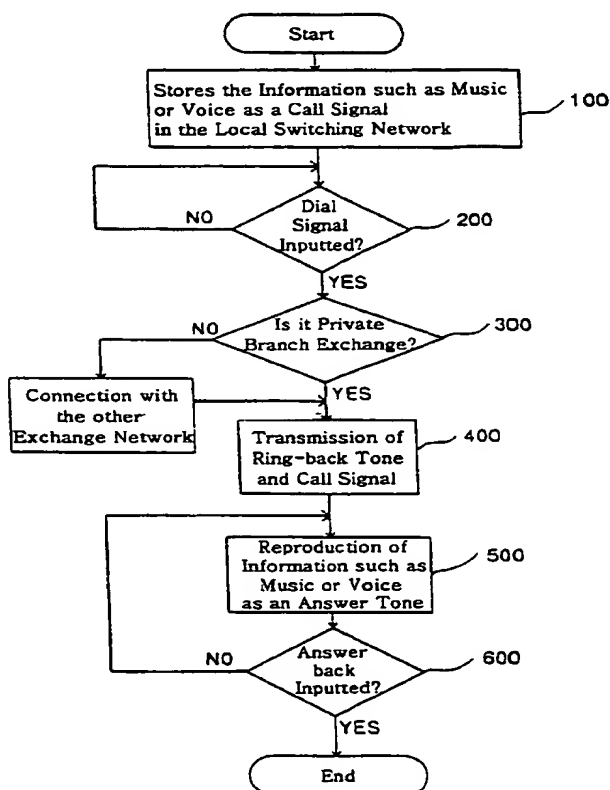
(72) Inventor: PARK, Won-Seop [KR/KR]; 715-1104 Ureuk Apartment, Sanbon-Dong, Kunpo-si, Kyunggi-do 435-040 (KR).

Published:

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[Continued on next page]

(54) Title: COMMUNICATION TERMINAL AND ADVERTISING METHOD USING THE SAME



(57) Abstract: The present invention relates to a communication terminal and an advertising method using said terminal. The communication terminal of the present invention comprises : call processing unit (10) wherein, user's voice call to be transmitted via the subscriber's line or wireless channel from private branch exchange or base station is processed; information signal processing unit (30) wherein music or voice with or without images for advertisement purpose transmitted via subscriber's line or wireless channel from private branch exchange or base station is processed; switching circuit (50) by which mode conversion is conducted between transmission mode and memory mode; memory unit (70) wherein information such as music or voice with or without images for advertisement is stored in advance; output unit (90) which consists of speaker, microphone and display, and outputs the voice from the call processing unit (10) and information from the information signal processing unit (30) and memory unit (70). By this configuration, it is possible to advertise audiovisually to the users of the above communication system.

WO 00/74253 A1



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- *Before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments.*
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

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COMMUNICATION TERMINAL AND ADVERTISING METHOD USING THE SAMETechnical Field

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The present invention relates to a communication terminal and an advertising method using said terminal, wherein informations such as music, voice, or images for advertisement are reproduced or displayed as a call signal, said informations to be transmitted to said communication terminal from the private branch exchange or base station in the wired or wireless communications network, or pre-stored into the memory of said communication terminal and to be selected by the user. After transmitted to said communication terminal from the private branch exchange or base station in the wired or wireless communications network, or pre-stored into the memory of said communication terminal, these informations are reproduced or displayed therein as a call signal according to the user's selection.

Background Art

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In general, as for the methods of exchanging information with the other party afar, there is a digital communication method, which exchanges digital information such as texts or numbers as well as an analog communication method, which exchanges analog information such as voice. And, a call is accomplished by an originating party's dialing a telephone number on a communication terminal and then confirming a ring-back tone, in conjunction with an called party's acknowledging the call from the buzzer of a communication terminal and then answering the same.

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Moreover, to accomplish a call, a communication system needs to be in place, comprising wired or wireless communication terminals and exchange system, capable of originating and answering, wherein said communication terminals and the exchange system are connected in a wired or wireless manner by means of a subscriber's line, with the exchange systems being connected by trunk cables.

Meanwhile, with the recent development of various technologies, communication systems are not an exception in rapid growth and development.

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- 2 -

Figure 1 shows a schematic diagram of a typical communication system currently in use. A wired or wireless terminal (A or B), capable of originating and answering, is connected to an exchange system line or a wireless channel. Between the switches, or the base stations, connections are via transit trunk cables in a wired or wireless manner.

Moreover, an exchange system comprises a speech-path unit, which provides a mutual speech path with respect to the originating and answering parties, and a control unit, which controls the speech-path unit. The control unit contains various programs, which process originating and answering, receive numbers, translate numbers, process busy calls, and do disconnections. Further, the exchange system uses a common-channel signal mode (signaling system No.7), which enables transmission of signals during a call, enables a high-speed transmission of data, and enables connection between different types of communication terminals.

Figure 2 shows a schematic circuit diagram of said communication terminal.

The communication terminal comprises a call-processing unit 1 which processes the user's voice transmitted from the private branch exchange or base station; a signal-processing unit 3 which processes the signals transmitted from the private branch exchange or the base station; a memory unit 5 having a pre-stored music, melody, etc.; and an output unit 7 which outputs the voices from a call processing unit or the music or melody pre-stored in the memory unit 5. Moreover, when a call signal is inputted into the answering communication terminal via a subscriber's line or a wireless channel from the private branch exchange or the base station, then the music, melody, etc., pre-stored in the memory unit 5 by a user, is outputted via the output unit 7 as an answer tone.

Figure 3 shows an outline of an intelligent network providing various types of additional services.

The intelligent network is generally equipped with large-scale computers and database onto the communication systems of Figure 1, which comprises a transfer network exchanging and transmitting information such as voice and data, a signal network transferring the

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control signals between the various elements of the transfer network by means of a common-channel signaling mode (No.7), and a service network controlling the services of the intelligent network while maintaining the user data.

5

The transfer network comprises a service switching points (SSP) and a local exchanges (LE), which carries out the functions of call connections and signal-gateway. The signal network comprises signal transfer points (STP), which relays the service signals by means of common-channel signaling mode (No. 7). The service network comprises a service control point (SCP) having software, database and computers which can change and add respective services. Moreover, the service control point (SCP) uses a service management system (SMS) and X.25 protocol. The signal transfer point (STP) uses a signaling engineering and administration system (SEAS) and X.35 protocol.

Currently, the following sets of services are being provided by means of the intelligent network (IN): free phone (FP), credit calling (CC), personal number (PN), wide area centrex (WAC), virtual private network (VPN), emergency response service ERS), televoting, public directory, teleconference, etc.

Figure 4 shows the diagrammatic flowchart of signals in a general call.

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Currently, the method and the communication terminal have been developed, wherein said communication terminal reproduces the melody pre-stored in the answering communication terminal as an answer tone when the private branch exchange or the base station transmits a call signal to the answering communication terminal.

Although a conventional communication terminal can reproduce the music, melody, etc. pre-stored in the memory as an answer tone, it has the problem that the conventional communication terminal cannot reproduce or display the information such as music, voice, or images, which is sent to the answering communication terminal from the private branch exchange or the base station.

#### Disclosure of Invention

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Therefore, one object of the present invention is to provide a communication terminal and advertising methods using the same, which

- 4 -

can selectively reproduces the information such as music, voice, or images, which is pre-stored in the memory or sent from the private branch exchange or the base station, on a speaker or a display device as an answer tone.

5

Another object of the present invention is to provide a communication terminal and advertising methods using the same, which can display on a displaying device the information such as the music, voice or images, which is pre-stored in the memory or sent from the private branch exchange or the base station.

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Still another object of the present invention is to provide a communication terminal and advertising methods using the same, which can advertise via a speaker or a displaying device the information such as music, voice or images, which is pre-stored in the memory or sent from the private branch exchange or the base station.

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#### Brief Description of Drawings

Figure 1 is a schematic diagram of a general communication network.

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Figure 2 is a schematic circuit diagram of a conventional communication terminal.

Figure 3 is a diagram outlining the intelligent network providing various types of services.

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Figure 4 is a diagram which illustrates how a call is accomplished by means of a communication terminals.

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Figure 5 is a schematic circuit diagram of the present invention.

Figure 6 is a flowchart explaining Example 1 of the present invention.

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Figure 7 is a flowchart explaining Example 2 of the present invention.

#### Modes for Carrying Out the Invention

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The present invention is explained in detail with references to the attached drawings as below:



- 5 -

## Example 1

Figure 5 is a schematic circuit diagram of the present invention.

5 As shown in Figure 5, the present invention comprises: a call-processing unit 10 which processes the user's voice call transmitted via a subscriber's line or a wireless channel from the private branch exchange or the base station; an information signal processing unit 30 which processes the signals and information such as music, voice or  
10 images for advertisement transmitted via a subscriber's line or a wireless channel from the private branch exchange or the base station; a switching circuit 50 which converts between transmitting mode and memory mode according to the user's selection; a memory unit 70 which pre-stores the information such as music, voice, or images for  
15 advertisement in the built-in memory; and an output unit 90, comprising a speaker, a microphone and a display device, which outputs the voice of said call-processing unit 10, and the information signals of said information signal processing unit 30 and said memory part 70.

20 Moreover, the output part 90 can convert the information such as music, voice or images to the data such as texts, and display the same on the display device.

Moreover, the information signal processing unit 30 can send or  
25 receive music, voice, data, etc., via a subscriber's line or a wireless channel from the private branch exchange or the base station. The output unit 90, comprising a speaker or a microphone, in addition to said display device, can simultaneously or selectively reproduce and display the voice, texts and image data.

30

Figure 6 is a flowchart explaining one embodiment of the present invention.

The operation of the present invention is described in detail with  
35 reference to Figure 6.

First, the information signal processing unit 30 determines whether there is an input of a signal or information signal such as music, voice, or image for advertisement, which is transmitted via a  
40 subscriber's line or wire channel from the private branch exchange or the base station.

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As a result, if the information signal is not inputted (NO), detection is made once again whether there is an input of an information signal while maintaining the in-active state of the call-processing unit 10. Alternatively, if the information signal is inputted (YES), detection is made which mode has been selected between the transmission mode and the memory mode on the switching circuit 50 by the user's manipulation.

Consequently, if the switching circuit 50 is detected to be in a transmission mode, the information signal inputted from the information signal processing unit 30 is outputted to the output unit 90. Alternatively, if it is selected as a memory mode, the information such as music, voice, images, pre-stored in the memory unit 70 is outputted to the output part 90.

Thereafter, the output unit 90 reproduces or displays the information such as music, voice, images for advertisement via a speaker, microphone or display device according to the mode of the switching circuit 50, which is transmission mode or memory mode to the user's choice.

Further, if the answering user transmits an answer signal for a call to the private branch exchange or the base station via a subscriber's line or a wireless channel, then the call-processing unit 10 is set to an active state, which leads to a voice call. Then, the data such as text, numbers, and images is inputted to the information signal processing unit 30, and displayed on the display device of the output unit 90.

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#### Example 2

Figure 7 is a flowchart to explain Example 2 of the present invention.

Example 2 is explained in detail with reference to Figure 7.

As shown in Figure 7, the present invention comprises: a step 100 which involves pre-storing the information such as music, voice or images for advertisement as a call signal in the computers installed in the private branch exchange or the base station; a step 200 which determines whether the dial signal has been inputted to the exchange of the private branch exchange or the base station from the originating

- 7 -

communication terminal; a step 300 which makes a selection according to said dial signal as to whether it is a call within the private branch exchange or the base station, or a call from the other switching  
5 network; a step 400 which involves transmitting a ring-back tone to the answering communication terminal while simultaneously transmitting the information such as music, voice, or images for advertisement, pre-stored in the computers, to the originating communication terminal as a call signal; a step 500 which reproduces the information such as  
10 music, voice, images for advertisement as an answer tone via a speaker on an answering communication terminal; and a step 600 which repetitively executes or terminates the step 500 according to the answer signal transmitted to the private branch exchange or the base station from the answering communication terminal.

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Here, in the private branch exchange or the base station includes exchanges and computers. In the computers, there are various application programs and database installed therein. Further, between the private branch exchange or the base station, and the other  
20 switching network, they are connected by means of a common-channel signaling mode (No. 7) in a wired or wireless manner.

The operation of the present invention is described in detail as follows:

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First, the information such as music, voice or images for advertisement is stored (step 100) as a call signal in the computers installed at the private branch exchange or the base station, followed by step 200.

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Then, in step 200, the originating communication terminal detects whether the dial signal has been inputted to the local switching network or the base station. If it is detected to be "NO," step 200 is once again executed. Alternatively, if it is determined to  
35 be "YES", step 300 is executed.

Next, in step 300, it is determined whether the call is from the private branch exchange or the base station, or from the other exchange networks. If it is detected to be "NO," then the private  
40 branch exchange or the base station, and the other telephone network are connected by means of a common-channel signaling mode (No. 7) in a wired or wireless manner, followed by step 400. Alternatively, if it is

- 8 -

selected to "YES", then the progression into step 400 is made.

5 In continuing, in step 400, a ring-back tone is simultaneously transmitted to the originating communication terminal from the exchanger of the private branch exchange or the base station while the information such as music, voice, or images for advertisement, pre-stored in the computers, is transmitted to the answering communication terminal as a call signal, followed by the progression into step 500.

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Consequently, in step 500, the information such as music, voice, or images for advertisement is reproduced as an answer tone via a speaker on the answering communication terminal, followed by the progression into step 600.

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Moreover, in step 600, it is detected whether the answer back was transmitted to the private branch exchange or the base station from the answering communication terminal. If it is detected to be "NO", step 500 is executed. If it is detected to be "YES", step 500 restarts, and  
20 the toll for the call is initiated.

#### Industrial Applicability

As described above, the present invention can reproduce or display  
25 on the output unit, according to the selection of network users, the information such as music, voice, or images for advertisement, pre-stored in the installed memory or transmitted from the private branch exchange or the base station via a subscriber's line or a wireless channel. As such, the present invention has the effect of audiovisually  
30 advertising the information such as music, voice, or images, in addition to the information such as texts or numbers, to the network users.

Further, the present invention stores information such as music,  
35 voice, or images as a call signal in the computers installed at the private branch exchange or the base station, and then transmits the information to the answering communication terminal and reproduces the information such as music, voice, or images as an answer tone via a speaker on the answering communication terminal. As such, the present  
40 invention has the effect of advertisement by communicating the information such as music or voice for advertisement to the communication terminal of the answering user.

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CLAIMS

1. A communication terminal which comprises:
  - 5 (a) a call-processing unit 10 which processes the user's voice call transmitted via a subscriber's line or a wireless channel from a private branch exchange or a base station;
  - 10 (b) an information signal process unit 30 which processes the signal and information of music, voice, or images for advertisement, transmitted via a subscriber's line or a wireless channel from the private branch exchange or the base station;
  - 15 (c) a switching circuit 50 which converts between transmitting mode and a memory mode according to the user's selection;
  - (d) a memory unit 70 which pre-stores the information such as music, voice, or images for advertisement in the built-in memory; and
  - 20 (e) an output unit 90, comprising a speaker, a microphone and a display device, which outputs the voice of said call-processing unit 10, and the information signal of said information signal processing unit 30, and said memory unit 70.
- 25 2. A communication terminal according to Claim 1, wherein said communication terminal is a wired or wireless communication terminal.
3. A communication terminal according to Claim 1, wherein said  
30 communication terminal is a wired or wireless image communication terminal.
4. A communication terminal according to Claim 2, wherein said output  
unit 90 reproduces, via said speaker or microphone, the signals or  
35 the information such as music, voice or images for advertisement, inputted via said information signal processing unit 30, according to the mode of said switching circuit 50.
5. A communication terminal according to Claim 2, wherein said output  
40 part 90 displays, via said display device, the signals or the information such as music, voice or images for advertisement, inputted via said information signal processing unit 30, according

- 10 -

to the mode of said switching circuit.

- 5 6. A communication terminal according to Claim 2, wherein said output unit 90 reproduces, via said speaker or microphone, the signals or the information such as music, voice or images for advertisement, pre-stored in said memory part 70, according to the mode of said switching circuit 50.
- 10 7. A communication terminal according to Claim 2, wherein said output unit 90 displays, via said display device, the signals or the information such as music, voice or images for advertisement, pre-stored in said memory unit 70, according to the mode of said switching circuit 50.
- 15 8. A communication terminal according to Claim 3, wherein said output unit 90 reproduces, via said speaker or microphone, the signals or the information such as music, voice or images for advertisement, pre-stored in said memory unit 70, according to the mode of said switching circuit 50.
- 20 9. A communication terminal according to Claim 3, wherein said output unit 90 displays, via said display device, the signals or the information such as music, voice or images for advertisement, pre-stored in said memory unit 70, according to the mode of said switching circuit 50.
- 25 10. A communication terminal according to Claim 3, wherein said output unit 90 reproduces, via said speaker or microphone, the signals or the information such as music, voice or images for advertisement, pre-stored in said memory part 70, according to the mode of said switching circuit 50.
- 30 11. A communication terminal according to Claim 3, wherein said output unit 90 displays, via said display device, the signals or the information such as music, voice or images for advertisement, pre-stored in said memory part 70, according to the mode of said switching circuit 50.
- 35 12. A communication terminal according to Claim 2 or 3, wherein said output part 90 reproduces, via said speaker or microphone, the signals or the information such as music, voice or images for
- 40

- 11 -

advertisement, inputted via said information signal processing unit 30, according to the mode of said switching circuit 50, and displays the information of images for advertisement on said display device.

5

13. A communication terminal according to Claim 2 or 3, wherein said output part 90 reproduces, via said speaker or microphone, the information such as music, voice or images for advertisement, pre-stored in said memory unit 70, according to the mode of said switching circuit 50, and displays the information of images for advertisement on said display device.

10

14. An advertising method by means of a communication terminal, which comprises the steps of:

15

pre-storing the information of music, voice, or images for advertisement as a call signal in a computer installed at a private branch exchange or a base station 100;

20

detecting whether a dial signal has been inputted to the exchanger of said private branch exchange or base station from an originating communication terminal 200;

25

selecting, according to said dial signal, as to whether it is a call within the private branch exchange or the same base station, or a call from the other exchanging network or base station 300;

30

transmitting a ring-back tone to an answering communication terminal while simultaneously transmitting the information such as music, voice, or images for advertisement, pre-stored in the computer, to the originating communication terminal by a call signal 400;

35

reproducing the information such as music, voice, images for advertisement as an answer tone via a speaker of said answering communication terminal 500 ; and

40

repetitively executing or terminating the step 500 according to the answer signal transmitted to the private branch exchange or the base station from the answering communication terminal 600.

15. The advertising method by means of the communication terminal according to Claim 14, wherein said communication terminal is a

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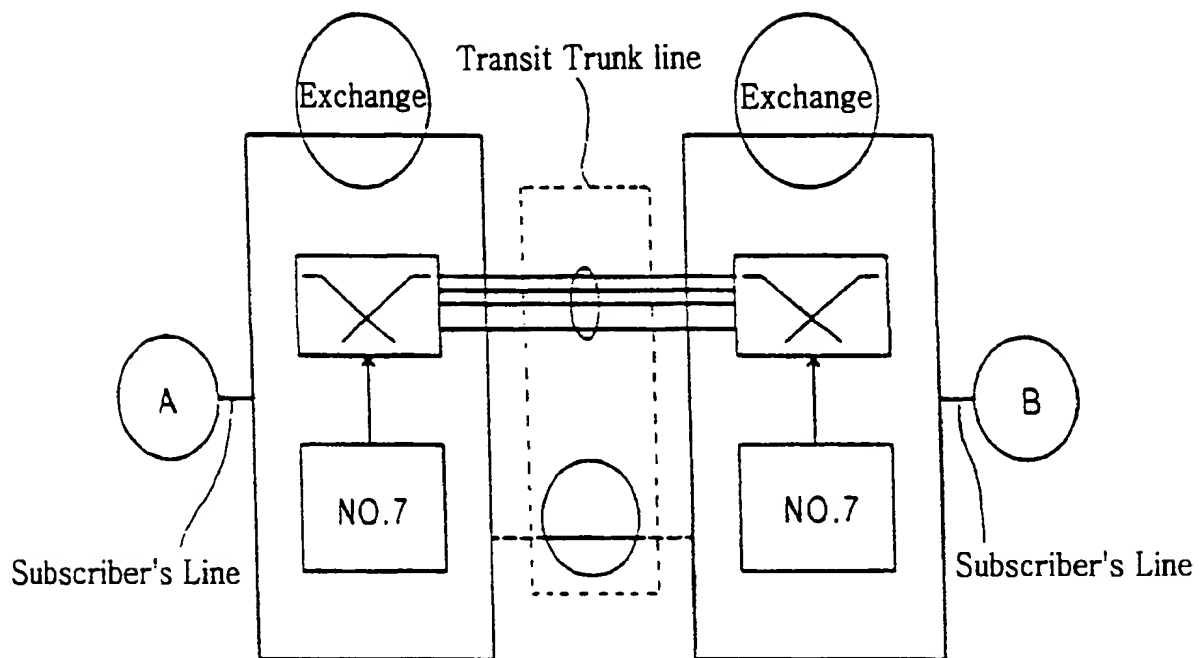
wired or wireless communication terminal.

- 5 16. The advertising method by means of the communication terminal according to Claim 14, wherein said communication terminal is a wired or wireless image communication terminal.
- 10 17. The advertising method by means of the communication terminal according to Claim 15, wherein said step 500 comprises reproducing the information such as music, voice or images for advertisement as an answer tone via said speaker on the answering communication terminal.
- 15 18. The advertising method by means of the communication terminal according to Claim 16, wherein said step 500 comprises displaying the information such as music, voice or images for advertisement via said display device on the answering communication terminal.
- 20 19. The advertising method by means of the communication terminal according to Claim 15 or 16, wherein said step 500 comprises reproducing the information such as music, voice or images for advertisement as an answer tone via said speaker on the answering communication terminal, while simultaneously displaying the information of images for advertisement via said display device on
- 25 the answering communication terminal 20.



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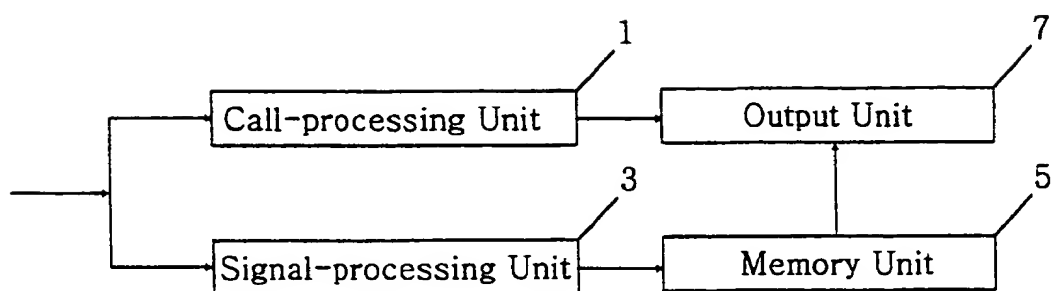
FIG. 1



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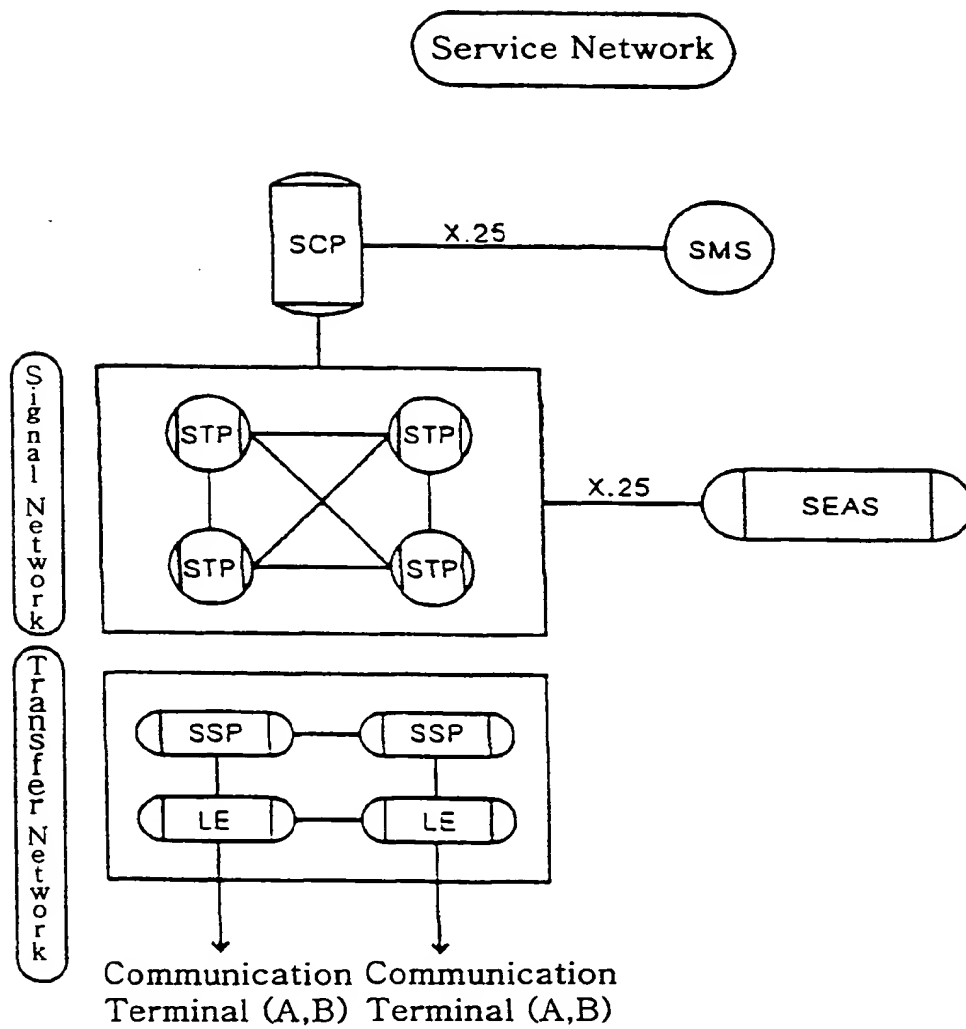
FIG. 2



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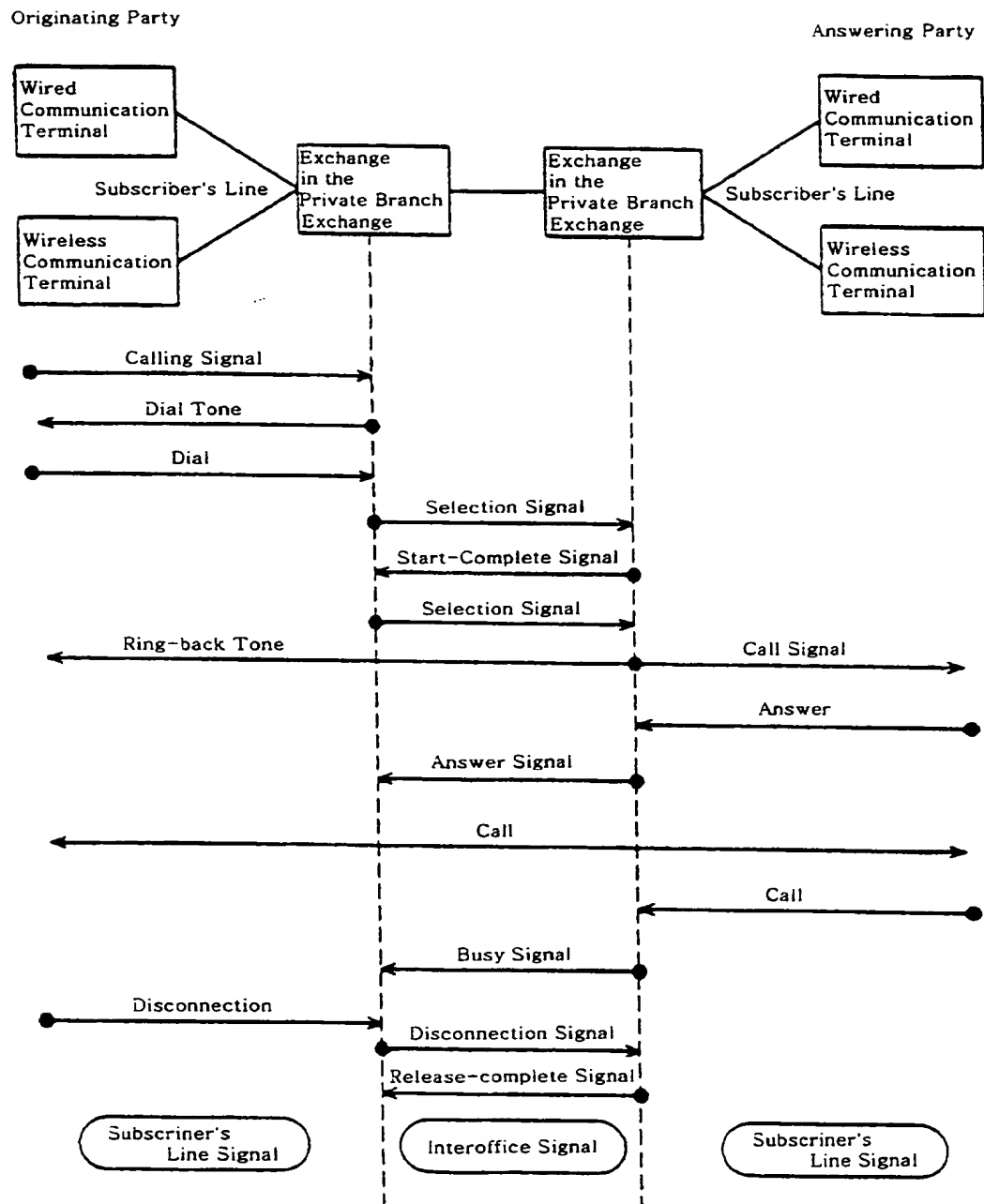
FIG. 3



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FIG. 4

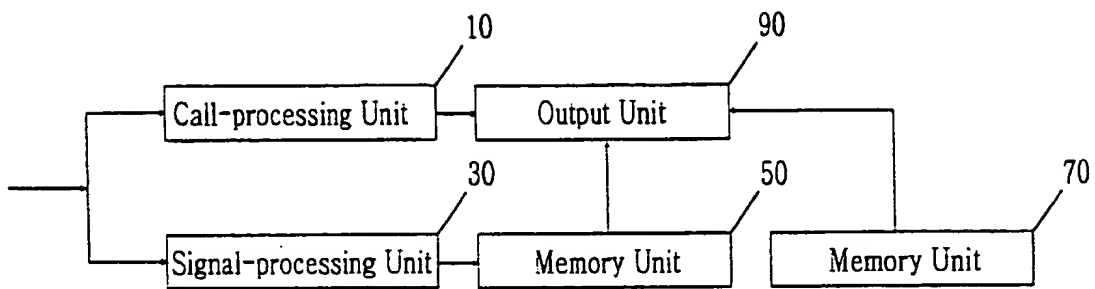


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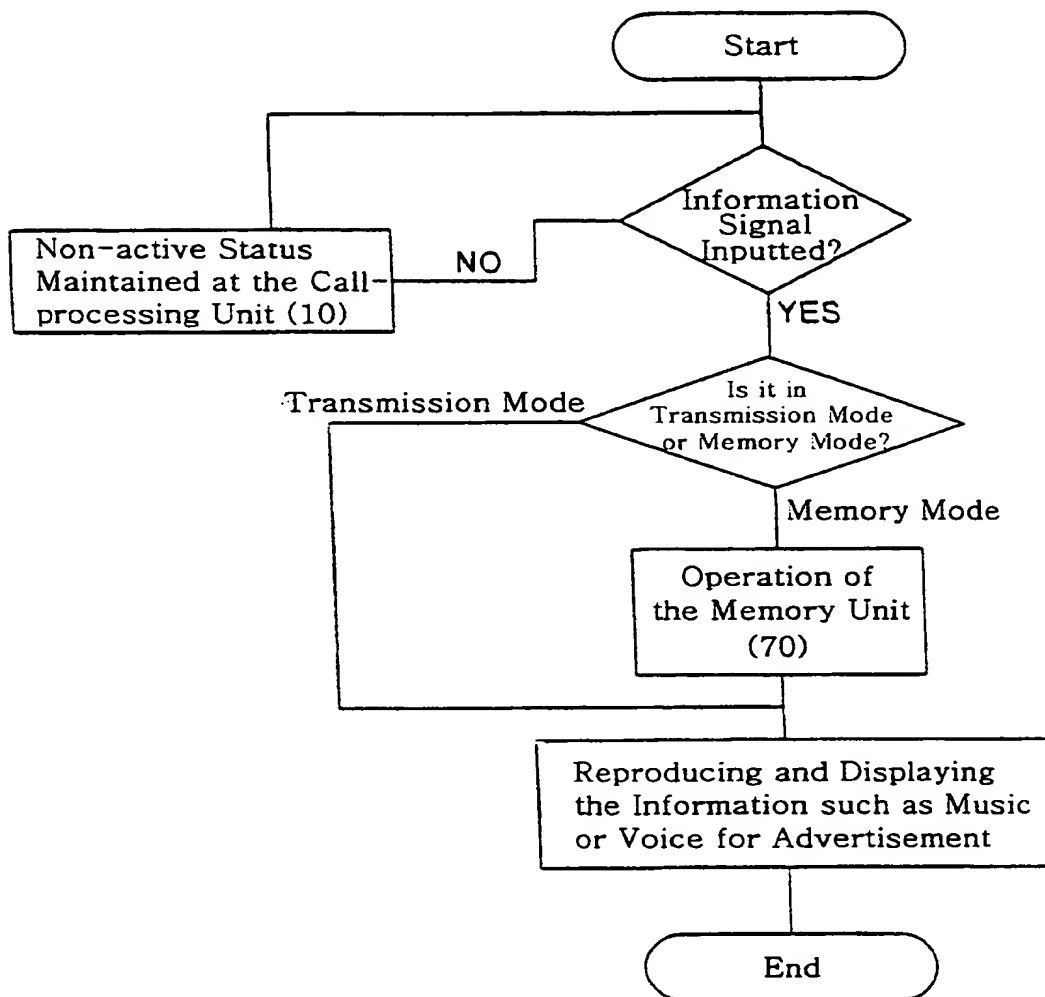
FIG. 5



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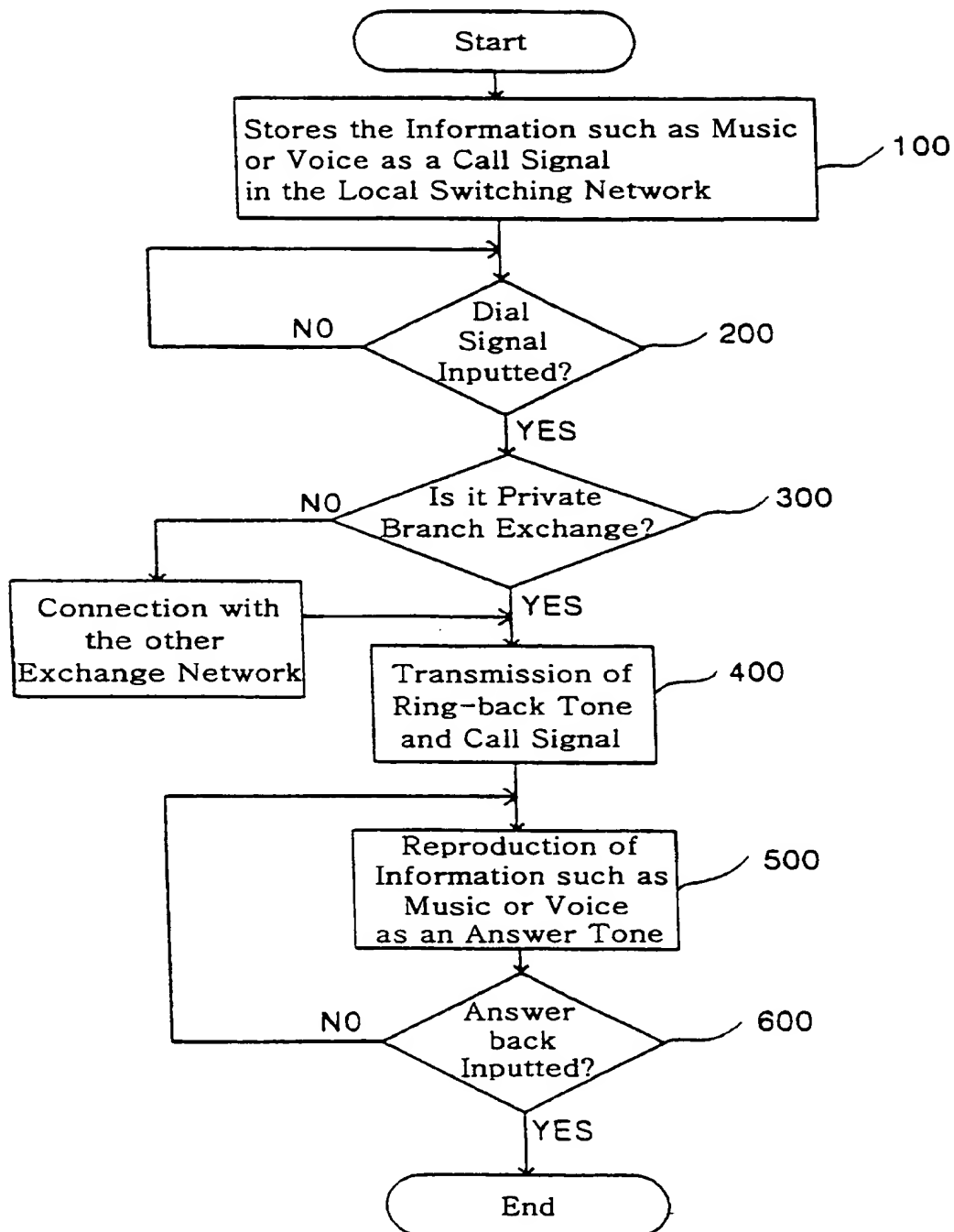
FIG. 6



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FIG. 7



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## INTERNATIONAL SEARCH REPORT

International application No.  
PCT/KR00/00549

**A. CLASSIFICATION OF SUBJECT MATTER****IPC7 H04B 1/38**

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 H04B 1/38, 1/40, 7/26, 5/04; H04M 1/64, 3/42, 11/00

Documentation searched other than minimum documentation to the extent that such documents are included in the files searched

Korean Patents applications for inventions since 1975

Korean Utility models and applications for Utility models since 1975

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

FPD, PAJ, PATROM

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X, P	KR 99-69433 A (LEE, EUN-JUNG) 6 Sep. 1999 See Abstract	1-19
X	KR 98-87748 A (Bum-il information and communication co.) 5 Dec. 1998 See Abstract and claim 1	1,2,4-7
X	KR 99-7634 A (Bum-il information and communication co.) 25 Jan. 1999 See Abstract and fig 4.	1,2,4-7
Y	US 5852775 A (Earthweb, inc.) 22 Dec. 1998 See Abstract and Fig 4.	1-19
Y	US 5739759 A (Toshiba Corporation.) 14 Apr. 1998 See Abstract	1-19
A	US 4850007 A (American Telephone and Telegraph Company) 18 Jul. 1989 See Abstract	1-19

☐ Further documents are listed in the continuation of Box C.

☒ See patent family annex.

\* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&amp;" document member of the same patent family

Date of the actual completion of the international search

25 SEPTEMBER 2000 (25.09.2000)

Date of mailing of the international search report

26 SEPTEMBER 2000 (26.09.2000)

Name and mailing address of the ISA/KR

Korean Industrial Property Office  
Government Complex-Taejon, Dunsan-dong, So-ku, Taejon  
Metropolitan City 302-701, Republic of Korea

Facsimile No. 82-42-472-7140

Authorized officer

RYU, Dong Hyun

Telephone No. 82-42-481-5706



**INTERNATIONAL SEARCH REPORT**

Information on patent family members

International application No.

PCT/KR00/00549

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
KR 99-12145 A	25. 02. 1999	NONE	
KR 99-7634 A	25. 01. 1999	NONE	
KR 99-69433 A	06. 09. 1999	NONE	
US 5739759 A	14. 04. 1998	JP 8-56188	27.02.1996
US 5852775 A	22. 12. 1998	NONE	
US 4850007 A	18. 07. 1989	NONE	



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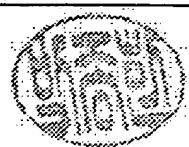
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INTERNATIONAL PRELIMINARY EXAMINATION REPORT  
(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 2000PCT007	<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. <b>PCT/KR00/00549</b>	International filing date (day/month/year) 29 MAY 2000 (29.05.2000)	Priority date (day/month/year) 31 MAY 1999 (31.05.1999)
International Patent Classification (IPC) or national classification and IPC  <b>IPC7 H04B 1/38</b>		
Applicant  PARK, Won-Seop		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of <u>3</u> sheets, including this cover sheet.  <input type="checkbox"/> This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).  These annexes consist of a total of _____ sheets.
3. This report contains indications relating to the following items:  I <input checked="" type="checkbox"/> Basis of the report II <input type="checkbox"/> Priority III <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability IV <input type="checkbox"/> Lack of unity of invention V <input checked="" type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement VI <input type="checkbox"/> Certain documents cited VII <input type="checkbox"/> Certain defects in the international application VIII <input type="checkbox"/> Certain observations on the international application

Date of submission of the demand  09 NOVEMBER 2000 (09.11.2000)	Date of completion of this report  13 AUGUST 2001 (13.08.2001)
Name and mailing address of the IPEA/KR Korean Intellectual Property Office Government Complex-Daejeon, Dunsan-dong, Seo-gu, Daejeon Metropolitan City 302-701, Republic of Korea Facsimile No. 82-42-472-7140	Authorized officer  PARK, Chong Han  Telephone No. 82-42-481-5713 

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## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/KR00/00549

## I. Basis of the report

## 1. With regard to the elements of the international application:\*

- ☒ the international application as originally filed
- ☐ the description:  
pages \_\_\_\_\_, as originally filed  
pages \_\_\_\_\_, filed with the demand  
pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_
- ☐ the claims:  
pages \_\_\_\_\_, as originally filed  
pages \_\_\_\_\_, as amended (together with any statement) under Article 19  
pages \_\_\_\_\_, filed with the demand  
pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_
- ☐ the drawings:  
pages \_\_\_\_\_, as originally filed  
pages \_\_\_\_\_, filed with the demand  
pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_
- ☐ the sequence listing part of the description:  
pages \_\_\_\_\_, as originally filed  
pages \_\_\_\_\_, filed with the demand  
pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_

## 2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language \_\_\_\_\_ which is

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).

## 3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, Nos. \_\_\_\_\_
- ☐ the drawings, sheet \_\_\_\_\_

5. ☐ This opinion has been drawn as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).\*\*

\* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this opinion as "originally filed." and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).

\*\* Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

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**INTERNATIONAL PRELIMINARY EXAMINATION**

International application No.

PCT/KR00/00549

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement****1. Statement**

Novelty (N)	Claims	1-19	YES
	Claims	None	NO
Inventive step (IS)	Claims	1-19	YES
	Claims	None	NO
Industrial applicability (IA)	Claims	1-19	YES
	Claims	None	NO

**2. Citations and explanations (Rule 70.7)**

Claims 1-13 meet the criteria set out in PCT Article 33(2)-(3) because the prior art does not teach or fairly suggest the use of a switching circuit which converts between transmitting mode and a memory mode according to the user's selection.

Claims 14-19 meet the criteria set out in PCT Article 33(2)-(3) because the prior art does not suggest the use of music, voice, or images for advertisement as a call signal.

Claims 1-19 meet the criteria set out in PCT Article 33(4) because it is directed to communication terminal and advertising method using the same.

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# PATENT COOPERATION TREATY

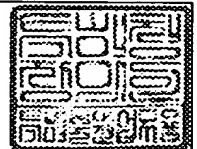
From the  
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

<p>To: YIM, Suk Jac</p> <p>8th Fl, Poonglim Bldg., 823-1, Yoksam-dong, Kangnam-ku Seoul 135-784, Republic of Korea</p>	<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; padding: 5px;"> <p>이경하 이경하 이경하</p> <p><i>(Handwritten signatures)</i></p> </div> <div style="border: 1px solid black; padding: 5px;"> <p><b>PCT</b></p> <p><i>(Handwritten marks)</i></p> </div> </div> <p><b>NOTIFICATION OF TRANSMITTAL OF INTERNATIONAL PRELIMINARY EXAMINATION REPORT</b></p> <p>( PCT Rule 71.1 )</p>	
<p>Date of mailing (day/month/year) 16 AUGUST 2001 (16.08.2001)</p>		
<p>Applicant's or agent's file reference 2000PCT007</p>	<p><b>IMPORTANT NOTIFICATION</b></p>	
<p>International application No. <b>PCT/KR00/00549</b></p>	<p>International filing date (day/month/year) 29 MAY 2000 (29.05.2000)</p>	<p>Priority date (day/months/year) 31 MAY 1999 (31.05.1999)</p>
<p>Applicant</p> <p>PARK, Won-Seop</p>		

1. The applicant is hereby notified that International Preliminary Examining Authority transmits here with the international preliminary examination report and its annexes, if any, established on the international application.
2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.
3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.
4. **REMINDER**  
 The applicant must enter the national phase before each elected office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices) (Article 39(1)) (see also the reminder sent by the International Bureau with Form PCT/IB/301).  
  
 Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.  
  
 For further details in the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.



<p>Name and mailing address of the IPEA/KR</p> <p>Korean Intellectual Property Office Government Complex-Daejeon, Dunsan-dong, Seo-gu, Daejeon Metropolitan City 302-701, Republic of Korea</p> <p>Facsimile No. 82-42-472-7140</p>	<p>Authorized officer</p> <p style="text-align: center;">COMMISSIONER</p> <p>Telephone No. 82-42-481-5210</p>
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# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 2000PCT007	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. <b>PCT/KR00/00549</b>	International filing date (day/month/year) 29 MAY 2000 (29.05.2000)	Priority date (day/month/year) 31 MAY 1999 (31.05.1999)
International Patent Classification (IPC) or national classification and IPC <b>IPC7 H04B 1/38</b>		
Applicant <b>PARK, Won-Seop</b>		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of <u>3</u> sheets, including this cover sheet. <input type="checkbox"/> This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT). These annexes consist of a total of _____ sheets.
3. This report contains indications relating to the following items: I <input checked="" type="checkbox"/> Basis of the report II <input type="checkbox"/> Priority III <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability IV <input type="checkbox"/> Lack of unity of invention V <input checked="" type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement VI <input type="checkbox"/> Certain documents cited VII <input type="checkbox"/> Certain defects in the international application VIII <input type="checkbox"/> Certain observations on the international application

Date of submission of the demand <b>09 NOVEMBER 2000 (09.11.2000)</b>	Date of completion of this report <b>13 AUGUST 2001 (13.08.2001)</b>
Name and mailing address of the IPEA/KR Korean Intellectual Property Office Government Complex-Daejeon, Dunsan-dong, Seo-gu, Daejeon Metropolitan City 302-701, Republic of Korea Facsimile No. 82-42-472-7140	Authorized officer <b>PARK, Chong Han</b> Telephone No. 82-42-481-5713

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# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/KR00/00549

## I. Basis of the report

### 1. With regard to the elements of the international application:\*

- ☒ the international application as originally filed
- ☐ the description:  
 pages \_\_\_\_\_, as originally filed  
 pages \_\_\_\_\_, filed with the demand  
 pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_
- ☐ the claims:  
 pages \_\_\_\_\_, as originally filed  
 pages \_\_\_\_\_, as amended (together with any statement) under Article 19  
 pages \_\_\_\_\_, filed with the demand  
 pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_
- ☐ the drawings:  
 pages \_\_\_\_\_, as originally filed  
 pages \_\_\_\_\_, filed with the demand  
 pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_
- ☐ the sequence listing part of the description:  
 pages \_\_\_\_\_, as originally filed  
 pages \_\_\_\_\_, filed with the demand  
 pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_

### 2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language \_\_\_\_\_ which is

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).

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- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

### 4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, Nos. \_\_\_\_\_
- ☐ the drawings, sheet \_\_\_\_\_

### 5. ☐ This opinion has been drawn as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).\*\*

\* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this opinion as "originally filed," and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).

\*\* Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

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# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/KR00/00549

## V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

### 1. Statement

Novelty (N)	Claims	1-19	YES
	Claims	None	NO
Inventive step (IS)	Claims	1-19	YES
	Claims	None	NO
Industrial applicability (IA)	Claims	1-19	YES
	Claims	None	NO

### 2. Citations and explanations (Rule 70.7)

Claims 1-13 meet the criteria set out in PCT Article 33(2)-(3) because the prior art does not teach or fairly suggest the use of a switching circuit which converts between transmitting mode and a memory mode according to the user's selection.

Claims 14-19 meet the criteria set out in PCT Article 33(2)-(3) because the prior art does not suggest the use of music, voice, or images for advertisement as a call signal.

Claims 1-19 meet the criteria set out in PCT Article 33(4) because it is directed to communication terminal and advertising method using the same.

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## INTERNATIONAL SEARCH REPORT

International application No.  
PCT/KR00/00549**A. CLASSIFICATION OF SUBJECT MATTER****IPC7 H04B 1/38**

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 H04B 1/38, 1/40, 7/26, 5/04; H04M 1/64, 3/42, 11/00

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Korean Patents applications for inventions since 1975

Korean Utility models and applications for Utility models since 1975

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

FPD, PAJ, PATROM

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X, P	KR 99-69433 A (LEE, EUN-JUNG) 6 Sep. 1999 See Abstract	1-19
X	KR 98-87748 A (Bum-il information and communication co.) 5 Dec. 1998 See Abstract and claim 1	1,2,4-7
X	KR 99-7634 A (Bum-il information and communication co.) 25 Jan. 1999 See Abstract and fig 4.	1,2,4-7
Y	US 5852775 A (Earthweb, inc.) 22 Dec. 1998 See Abstract and Fig 4.	1-19
Y	US 5739759 A (Toshiba Corporation.) 14 Apr. 1998 See Abstract	1-19
A	US 4850007 A (American Telephone and Telegraph Company) 18 Jul. 1989 See Abstract	1-19

☐ Further documents are listed in the continuation of Box C.☒ See patent family annex.

## \* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&amp;" document member of the same patent family

Date of the actual completion of the international search

25 SEPTEMBER 2000 (25.09.2000)

Date of mailing of the international search report

26 SEPTEMBER 2000 (26.09.2000)

Name and mailing address of the ISA/KR

Korean Industrial Property Office  
Government Complex-Taejon, Dunsan-dong, So-ku, Taejon  
Metropolitan City 302-701, Republic of Korea

Facsimile No. 82-42-472-7140

Authorized officer

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Telephone No. 82-42-481-5706



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# INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.


PCT/KR00/00549

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
KR 99-12145 A	25. 02. 1999	NONE	
KR 99-7634 A	25. 01. 1999	NONE	
KR 99-69433 A	06. 09. 1999	NONE	
US 5739759 A	14. 04. 1998	JP 8-56188	27.02.1996
US 5852775 A	22. 12. 1998	NONE	
US 4850007 A	18. 07. 1989	NONE	

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협 . 력 . 조 . 약  
(PATENT COOPERATION TREATY)

발신 : 국제조사기관

<p>수신 : YIM, Suk Jae  8th Fl, Poonglim Bldg., 823-1, Yoksam-dong, Kangnam-ku, Seoul 135-784, Republic of Korea</p>	<div style="text-align: right;">               국제조사보고서 또는 국제조사보고서 부작성 선언서 송부 통지서           </div>		
(PCT 규칙 44.1)			
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">발송일 (일/월/년)</td> <td>27 SEPTEMBER 2000 (27.09.2000)</td> </tr> </table>		발송일 (일/월/년)	27 SEPTEMBER 2000 (27.09.2000)
발송일 (일/월/년)	27 SEPTEMBER 2000 (27.09.2000)		
출원인 또는 대리인 서류참조기호 2000PCT007	이후의 절차에 대하여는 아래 1. 및 4. 참조		
국제출원번호 <b>PCT/KR00/00549</b>	국제출원일 (일/월/년) 29 MAY 2000 (29.05.2000)		
출원인  PARK, Won-Seop			

1. ☒ 국제보고서가 작성되어 이를 송부함을 출원인에게 통지합니다.  
 조약 제19조의 규정에 의한 보정서 및 설명서의 제출:  
 희망하는 경우 출원인은 국제출원의 청구의 범위를 보정할 수 있습니다. (조약규칙 46):  
 기간 보정서 제출기간은 통상 국제조사보고서 송부일로부터 2월; 보다 자세한 사항은  
 첨부용지에 기재된 설명(NOTE)을 참조.  
 제출처 WIPO 국제사무국  
 34, chemin des Colmbetts  
 1211 Geneva 20, Switzerland  
 팩스번호: (41-22) 740 14 35  
 보다 자세한 지침에 대하여는 첨부되는 용지에 기재된 설명을 참조.
  
2. ☐ 국제조사보고서가 작성되지 아니할 것이며 조약 제17조(2)(a)의 규정에 의한 선언서가 송부됨을 출원인에게 통지합니다.
  
3. ☐ 조약규칙 40.2의 규정에 의한 추가수수료 납부에 대한 이의신청과 관련하여 아래 사항을 출원인에게 통지합니다.
 

☐ 이의신청 및 이의신청에 대한 결정 통지서를 출원인이 제출한 이의신청 및 이의신청에 대한 결정 통지서의 지정관청에의 송부 신청서와 함께 국제사무국에 송부하였습니다.  
☐ 이의신청에 대한 결정이 아직 이루어지지 않았습니다. 결정이 이루어지는 대로 출원인에게 통지할 것입니다.
  
4. 추가 조치사항: 출원인은 다음 사항을 상기하여야 합니다.  
 우선일부터 18월 직후 국제사무국은 국제출원을 공개합니다. 공개를 하지 않거나 또는 연기할 것을 희망하는 경우에는 출원인은 국제공개의 기술적 준비가 완료되기 전에 각각의 경우에 따라 조약 규칙 90bis.1 및 90bis.3의 규정에 의한 국제출원 취하서 또는 우선권주장 취하서를 국제사무국에 제출하여야 합니다.  
 출원인이 우선일부터 30월까지 (일부관청에 대하여는 더 늦을수도 있음) 국내단계의 개시를 연기하고자 하는 경우에는 우선일부터 19월 이내에 국제예비심사를 청구하여야 합니다.  
 출원인은 우선일부터 19월 이내에 국제예비심사청구서에서 또는 후선택시에 선택되지 아니하거나 또는 조약 제2장에 기속되지 아니하여 선택이 불가능한 모든 지정관청에 대하여 우선일부터 20월 이내에 국내단계를 개시하기 위한 절차를 밟아야 합니다.

ISA/KR의 명칭 및 우편주소 대한민국 특허청 302-701 대한민국 대전광역시 서구 둔산동 정부대전청사	특허청장
팩스 번호 82-42-472-7140	전화번호 82-42-481-5131

서식 PCT/ISA/220 (1998년 7월)

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## 서식 PCT/ISA/220에 대한 설명(NOTE)

이 설명은 조약 제19조의 규정에 의한 보정에 관한 기본적인 안내입니다. 이는 특허협력조약, 조약규칙 및 조약시행세칙에 의한 요건에 기초하고 있습니다. 이 설명과 앞서 언급된 요건 사이에 상이점이 있는 경우에는 후자가 적용됩니다. 보다 자세한 정보에 대하여는 WIPO 발행 PCT 출원인 안내를 참조.

이 설명에서 "조약", "조약규칙" 및 "조약시행세칙"이라 함은 각각 특허협력조약, 특허협력조약에 의한 시행규칙 및 특허협력조약에 의한 시행세칙을 말합니다.

### 조약 제19조의 규정에 의한 보정에 관한 안내

국제조사보고서를 수령한 후 출원인은 1회에 한하여 국제출원의 청구의 범위를 보정할 기회를 가집니다. 국제출원의 모든 부분(청구의 범위, 명세서 및 드면)은 국제예비심사 절차 동안에 보정이 가능하므로, 예를 들어 출원인이 가보호(provisional protection)를 위하여 조약 제19조의 규정에 의한 보정이 공개될 것을 희망하는 경우 또는 국제공개전에 청구의 범위를 보정할 다른 이유가 있는 경우를 제외하고는 통상 조약 제19조의 규정에 의한 보정을 할 필요는 없습니다. 또한 가보호는 일부국가에서만 가능함을 명심해야 합니다.

국제출원의 어느 부분을 보정할 수 있는가?

조약 제19조의 규정에 의하여 청구의 범위만을 보정할 수 있습니다.

국제단계중에는 조약 제34조의 규정에 의하여 국제예비심사기관에 대하여 청구의 범위를 보정(추가 보정도 가능)할 수 있습니다. 명세서 및 드면은 조약 제34조의 규정에 의하여 국제예비심사기관에 대하여만 보정(추가 보정도 가능)할 수 있습니다.

국내단계를 개시할 때 국제출원의 모든 부분은 조약 제28조 또는 제41조(해당하는 경우)의 규정에 의하여 보정할 수 있습니다.

기간은? 국제조사보고서 송부일부터 2월 또는 우선일부터 16월중 늦게 만료하는 날. 다만, 기간 만료후 국제공개의 기술적 준비가 완료되기 전에 국제사무국에 보정서가 수리된 경우에는, 기간내에 수리된 것으로 봅니다(조약규칙 46.1).

보정서를 제출하지 않아야 할 곳은?

보정서는 수리관청 또는 국제조사기관이 아니라 국제사무국에 제출하여야 합니다(조약규칙 46.2).

국제예비심사청구서가 제출된 경우에는 아래 참조.

방법은? 1 또는 2이상의 청구항 전부의 삭제, 1 또는 2이상의 새로운 청구항의 추가 또는 1또는 2이상의 출원시 청구항의 변경을 통하여 이루어짐.

보정에 의하여 최초 출원시의 용지와 달라지는 청구항의 각 용지에 대하여는 대체용지를 제출하여야 합니다.

대체용지상의 모든 청구항은 아라비아 숫자로 번호를 부여하여야 합니다. 청구항이 삭제된 경우에는 타 청구항에 대하여 번호를 다시 부여할 필요는 없습니다. 번호를 다시 부여한 경우에는 항상 연속된 번호를 부여해야 합니다(조약시행세칙 205(b)).

보정은 당해 국제출원의 공개언어로 하여야 합니다.

보정서에 수반되는/수반되어야 하는 서류는?

서한(조약시행세칙 205(b)):

보정서는 서한과 함께 제출하여야 합니다.

서한은 국제출원 및 보정된 청구의 범위와 함께 공개되지 않습니다. 서한은 "조약 제19조(1)의 규정에 의한 설명서"와 혼동해서는 안됩니다(아래 조약 제19조(1)의 규정에 의한 설명서 참조).

서한은 출원인의 선택에 따라 영어 또는 불어로 작성하여야 합니다. 다만, 국제출원언어가 영어인 경우에는 영어로, 국제출원언어가 불어인 경우에는 불어로 작성하여야 합니다.

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